

AMENDMENTS TO THE SPECIFICATION

Kindly amend the paragraph located at page 7, lines 17-28 as follows

In determining whether a match for the voice mail message exists, a specific matching score threshold limit may be set. If the matching score, which measures the extent to which the voice mail speech signal matches a specific speaker model, exceeds the matching score threshold, a match is said to exist. ~~Each voice mail message may be tagged with an indication of certainty of the identity of the caller for each respective voice mail message, regardless of whether a match is said to exist or whether the identity is unknown.~~ The quality of the match, as measured by the matching score, may be affected by a number of factors, including environmental noise and distortion affecting the recording, and transmission channel noise and distortion, notably originating in wireless telephone channels. The quality of the match may also be affected by other conditions, including the caller's speaking behavior, the duration of the message, and the similarity of the caller's speaker model to other callers' models. With respect to any of these factors, when the matching score does not exceed the matching score threshold, the voice message may be tagged as "unknown" thereby requiring the user or subscriber to label the voice with a speaker tag if he/she wishes to store the message in a specific caller folder.

Kindly amend the paragraph beginning at the top of page 8 of the specification as follows:

which have been created. Each speaker model represents a unique caller and is identified by unique acoustic features which have been extracted from that caller's voice mail message(s). As shown in FIG. 2, for example, Caller A will have a Speaker model A associated with it, Caller B will have a Speaker model B associated with it, Caller C will have a Speaker model C associated with it, and Caller D will have a Speaker model D associated with it. In the present invention,

the speech signals from the voice mail messages are analyzed and speaker models are created using speaker recognition techniques. For example, some exemplary speaker recognition techniques are disclosed in Speaker Identification and Verification Using Gaussian Mixture Speaker Models, Speech Communication 17, pp.91-108, Douglas A. Reynolds, the teachings of which are incorporated herein by reference. Here, the speaker verification involves a likelihood ratio of quantifying the likelihood of the utterance if from a given speaker. This provides a gauge of certainty to the system regarding the verification.

Kindly amend the paragraph located at page 10, lines 5-18 as follows:

In the present invention, the user may interact with the system via a number of user interfaces. Generally, the user will be interacting with the voice mail system through an Interactive Voice Response Unit which may be responsive to the user's input through speech signal provided over a telephone speaker and/or tone signals provided over a telephone keypad, such as through a standard landline phone, ISDN unit or wireless telephone device. Thus the user may access the voice mail system, provide speaker or caller labels, save and delete voice mail messages, search voice mail messages and access other administrative function through this interface, ~~such as altering the specific matching score threshold, inspecting voice mail messages for tagged indications of certainty of identity, etc.~~ Additionally, the user may access the system of the present invention through a personal computer, palmtop device, laptop and other communicative device capable of interfacing with the voice mail system. In an embodiment where a personal computer is used for access, the user may be provided with a graphical user interface which represents the user's mailbox with one or more visual identifiers, i.e. icons provided on a visual display ~~or visual cues showing the tagged indication of the determined certainty such as a color scheme change or a transparency effect.~~ The user's mailbox may be

further divided into caller mailboxes and/or folders which are represented on the screen by separate icons.